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L1 ANSWER 1 OF 1 WPINDEX (C) 2003 THOMSON DERWENT
ACCESSION NUMBER: 1994-341690 [42] WPINDEX
DOC. NO. CPI: C1994-155613
TITLE: Catalyst for synthesis gas prodn. from carbon dioxide and methane - and/or other light hydrocarbon cpds., which has thermostabilised calcined zirconia support coated with gp. VIII metal by physical adsorption.
DERWENT CLASS: E36 H04 J04
INVENTOR(S): MERCERA, P D L; ROSS, J R H; SESHAN, K; XUE, E; ROSS, J R; SESHAN, K I
PATENT ASSIGNEE(S): (MANS) MANNESMANN AG; (KTIK-N) KTI GROUP BV; (KTIK-N) KTI GROUP
COUNTRY COUNT: 53
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
WO 9424042	A1	19941027	(199442)*	GE	36	C01B003-40	
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE							
W: AU BB BG BR BY CA CN CZ FI GE HU JP KG KP KR KZ LK LV MD MG MN MW NO NZ PL RO RU SD SI SK TJ UA US UZ VN							
AU 9466759	A	19941108	(199507)			C01B003-40	
NO 9503943	A	19951004	(199551)			C01B003-40	
EP 695279	A1	19960207	(199610)	GE		C01B003-40	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE							
BR 9406357	A	19960227	(199615)			C01B003-40	
CZ 9502761	A3	19960313	(199618)			C01B003-40	
JP 09500054	W	19970107	(199711)		32	B01J023-63	
EP 695279	B1	19970604	(199727)	GE	23	C01B003-40	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE							
DE 59403037	G	19970710	(199733)			C01B003-40	
HU 72430	T	19960429	(199742)			C01B003-40	
CN 1121701	A	19960501	(199745)			C01B003-40	<--
ES 2105701	T3	19971016	(199748)			C01B003-40	
US 5989457	A	19991123	(200002)			C07C001-02	
CZ 286018	B6	19991215	(200007)			C01B003-40	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9424042	A1	WO 1994-DE513	19940420
AU 9466759	A	AU 1994-66759	19940420
NO 9503943	A	WO 1994-DE513	19940420
		NO 1995-3943	19951004
EP 695279	A1	EP 1994-914323	19940420
		WO 1994-DE513	19940420
BR 9406357	A	BR 1994-6357	19940420
		WO 1994-DE513	19940420
CZ 9502761	A3	CZ 1995-2761	19940420
JP 09500054	W	JP 1994-522634	19940420
		WO 1994-DE513	19940420
EP 695279	B1	EP 1994-914323	19940420
		WO 1994-DE513	19940420
DE 59403037	G	DE 1994-503037	19940420
		EP 1994-914323	19940420
		WO 1994-DE513	19940420
HU 72430	T	WO 1994-DE513	19940420
		HU 1995-3026	19940420
CN 1121701	A	CN 1994-191860	19940420
ES 2105701	T3	EP 1994-914323	19940420
US 5989457	A	WO 1994-DE513	19940420

		US 1996-537791	19960124
CZ 286018	B6	WO 1994-DE513	19940420
		CZ 1995-2761	19940420

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9466759	A	Based on	WO 9424042
EP 695279	A1	Based on	WO 9424042
BR 9406357	A	Based on	WO 9424042
JP 09500054	W	Based on	WO 9424042
EP 695279	B1	Based on	WO 9424042
DE 59403037	G	Based on	EP 695279
		Based on	WO 9424042
HU 72430	T	Based on	WO 9424042
ES 2105701	T3	Based on	EP 695279
US 5989457	A	Based on	WO 9424042
CZ 286018	B6	Previous Publ.	CZ 9502761
		Based on	WO 9424042

PRIORITY APPLN. INFO: DE 1993-4313673 19930422
REFERENCE PATENTS: EP 333037; EP 33505; EP 414573; EP 495534
INT. PATENT CLASSIF.:
MAIN: B01J023-63; C01B003-40; C07C001-02
SECONDARY: B01J021-06; B01J023-40; B01J023-42; B01J023-56; B01J023-74; B01J023-755; B01J023-76; B01J023-89

BASIC ABSTRACT:

WO 9424042 A UPAB: 19941212
Catalyst (I), for the prodn. of synthesis gas (CO and H2) by reacting CO2 and CH4 and/or other light hydrocarbons, consists of an oxide support (II) and 0.1-7.0 (wt.)% coating contg. gp. VIII metal(s). (II) contains at least 80, pref. at least 90% ZrO2, which is calcined at max. 670deg.C before applying the coating, and is stabilised by mixing with 0.5-10 mole-% Y, La, Al, Ca, Ce and/or Si oxide(s). The coating is applied by dry or wet impregnation in a purely physical method by adsorption of a complex cpd. in a solvent and evapn. of the solvent, then the material is calcined at max. 800deg.C.

ADVANTAGE - (I) is active enough to give high yields of CO and H2 and has a long active life, since it does not coke up excessively, even if approx. stoichiometric amts. of CO2 and CH4 are used. Addn. of steam during the reaction can be avoided.

Dwg.0/6

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; GI; DCN
MANUAL CODES: CPI: E31-A01; E35; H04-E04; H04-F02E; J04-E04; N02; N03-B02; N06-E; N06-F

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[12] 发明专利申请公开说明书

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C01B 3/40

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[85]进入国家阶段日期 95.10.23

[71]申请人 曼内斯曼股份公司

地址 联邦德国杜塞尔多夫

共同申请人 KTI集团公司

[72]发明人 K-I·塞册 J·R-H·罗斯

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[74]专利代理机构 中国国际贸易促进委员会专利商标事务所

代理人 龚卫民

B01J 21/06 B01J 23/56

B01J 23/76

权利要求书 2 页 说明书 23 页 附图页数 3 页

[54]发明名称 制备合成气用的催化剂

[57]摘要

本发明涉及一种通过 CO_2 和 CH_4 和/或其它轻质烃的反应制备合成气（CO 和 H_2）所用的催化剂。其组成是：具有至少 80 重量% ZrO_2 和元素 Y、La、Al、Ca、Ce 和 Si 的氧化物的载体材料以及含有Ⅷ族的金属的涂层。涂层是通过吸附作用以物理方式地加上去的。

权 利 要 求 书

1. 用于通过 CO_2 和 CH_4 和/或其它轻质烃的反应制备合成气（CO 和 H_2）的催化剂，其组成是一种氧化的载体材料和共计 0.1—7.0 重量%的由化学元素周期表 VIII 族的至少一种金属所形成的涂层，其特征是，

—载体材料至少占 80 重量%，优选至少占 90 重量%，是由 ZrO_2 组成，加涂层前在最高 670℃下煅烧，

—通过混入含量为 0.5—10mol%的元素 Y、La、Al、Ca、Ce 和 Si 的一种或多种氧化物使载体材料热稳定，以及

—通过纯物理途径按已知的干浸渍法或湿浸渍法的加涂层是通过以络合化合物的形式存在于溶剂中的涂层物质的吸附作用和紧接着蒸发溶剂进行的，其中这样得到的物质最后在最高 800℃下煅烧。

2. 根据权利要求 1 的催化剂，其特征是，涂层由 Pt 组成并且占制备成的催化剂的 0.1—5 重量%。

3. 根据权利要求 2 的催化剂，其特征是：涂层共计 0.1—2 重量%。

4. 根据权利要求 1 的催化剂，其特征是：涂层由 Ni 组成和共计 0.5—5 重量%。

5. 根据权利要求 1 的催化剂，其特征是：涂层至少由 Pt 和 Ni 组成。

6. 根据权利要求 5 的催化剂，其特征是：Pt 的量共计 0.1—2 重量%且 Ni 的量共计 2—5 重量%。